

REMARKS

Applicant thanks the Examiner for the careful consideration of this application. Claims 1-21 and 23-27 are currently pending. Claims 1-20 and 23-27, the specification, and the drawings have been amended. Based on the foregoing amendments and the following remarks, the Applicant respectfully requests that the Examiner reconsider all outstanding rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 112

The Office Action rejected claims 1 and 20 under 35 U.S.C. § 112, second paragraph, as being indefinite. The Office Action asserted that no description corresponding to the “main distribution channel” and “further distribution channel” are contained in the disclosure. The Applicant traverses this rejection. Nevertheless, solely to further prosecution, the specification has been amended at paragraphs 0090, 0091, 0098, and 0108 to expressly describe the “main distribution channel” and “further distribution channel.” Figs. 8 and 29 have also been amended to include further lead lines and dimension lines pointing out the “further distribution channel.” No new matter has been added by these amendments, particularly in view of the original disclosure, for example, in Figs. 8 and 29, and paragraph 0097. In view of the foregoing, the Applicant requests that this rejection be withdrawn.

Rejections under 35 U.S.C. § 103

- (1) The Office Action rejected claims 1, 3-7, and 11-19 under 35 U.S.C. § 103(a) as

being obvious U.S. Patent No. 6,554,408 to Miki et al. ("Miki") in view of U.S. Patent No. 6,412,921 to Manini ("Manini") and U.S. Patent No. 4,994,826 to Tellier ("Tellier"). The Office Action further rejected claims 2, 9, and 10 under 35 U.S.C. § 103(a) as being obvious over Miki in view of Manini and Tellier. The Applicant traverses this rejection. Nevertheless, claim 1, the independent claim, has been amended solely to further prosecution.

The Applicant informally submitted amended claim 1 to Examiner Witkowski on April 14, 2010. The Applicant appreciates Examiner Witkowski's indication that amended claim 1 appears to distinguish over the applied prior art references. Applicant submits that claim 1 is patentable for at least the following reasons.

First, no reasonable combination of Miki, Manini, and Tellier discloses or renders obvious a "main distribution channel extending along the front surface of the silicon chip without interruptions," as recited by claim 1. The Office Action appears to align the silicon substrate 17 or 61 of Miki's FIGs. 1 and 12, respectively, with the claimed "silicon chip." In addition, the Office Action apparently aligns the ink inlet 16 or 65 of Miki's FIGs. 1 and 12, respectively, with the claimed "main distribution channel." However, neither the ink inlet 16 nor the ink inlet 65 "extend[s] along the front surface" of the silicon substrate 17 or silicon substrate 61 "without interruptions," as claimed. Rather, referring to Miki's FIGS. 1 and 12, in both instances, the ink inlet 16 and the ink inlet 65 are blocked, or interrupted from, the front surface of the respective silicon substrate 17, 61 by a portion of the silicon substrate 17, 61 itself. See, specifically, the portion of silicon substrate 17 having a square cross-section depicted in the upper-right-hand corner of Miki's FIG. 1. Manini and Tellier fail to remedy the deficiencies of Miki. Accordingly, no reasonable combination of Miki, Manini, and Tellier

discloses or renders obvious a “main distribution channel extending along the front surface of the silicon chip without interruptions,” as recited by claim 1.

Second, no reasonable combination of Miki, Manini, and Tellier discloses or renders obvious a “feeding duct being in fluid communication with . . . the main distribution channel,” as recited by claim 1. As discussed above, the Office Action apparently aligns the ink inlet 16 or 65 of Miki’s FIGs. 1 and 12, respectively, with the claimed “main distribution channel.” In addition, the Office Action apparently aligns the first tank 34a of Manini’s FIG. 1 with the claimed “feeding duct.” However, even if Miki and Manini were combined in the manner set forth by the Office Action, Manini’s first tank 34a would not be “in fluid communication with” Miki’s ink inlet 16 or 65. This is because the right-hand-most portion of Miki’s silicon substrate 17 or 61 would **block** fluid communication between Manini’s first tank 34a and Miki’s ink inlet 16 or 65. Tellier does not remedy the deficiencies of Miki and Manini. Accordingly, no reasonable combination of Miki, Manini, and Tellier discloses or renders obvious a “feeding duct being in fluid communication with . . . the main distribution channel,” as recited by claim 1.

Third, no reasonable combination of Miki, Manini, and Tellier discloses or renders obvious “ejection nozzles . . . parallel to the heating elements and the top surface of the silicon chip,” as recited by claim 1. The Office Action apparently aligns the ink outlets 14 shown in Miki’s FIG. 1 with the claimed “ejection nozzles.” In addition, the Office Action apparently aligns the electrode terminals 32, 37 shown in Tellier’s FIG. 1 with the claimed “heating elements.” However, even if Miki and Tellier were combined in the manner set forth by the Office Action, Miki’s ink outlets 14 would not be “parallel to” Tellier’s electrode terminals 32, 37, as claimed. This is because Tellier shows that its nozzles 27 are

oriented *perpendicularly* to the electrode terminals 32, 37, as shown in FIG. 1. Manini does not remedy the deficiencies of Miki and Tellier. Accordingly, no reasonable combination of Miki, Manini, and Tellier discloses or renders obvious “ejection nozzles . . . parallel to the heating elements and the top surface of the silicon chip,” as recited by claim 1.

Claim 1 is patentable over Miki in view of Manini and Tellier for at least the foregoing reasons. Claims 2-7 and 9-19 depend from claim 1, and are patentable for at least the same reasons.

(2) The Office Action rejected claim 8 under 35 U.S.C. § 103(a) as being obvious over Miki and Manini and Tellier, and further in view of U.S. Patent No. 4,879,568 to Bartky et al. (“Bartky”). Claim 8 depends indirectly from claim 1, which as demonstrated above, is patentable over Miki in view of Manini and Tellier. Bartky does not remedy the deficiencies of Miki, Manini, and Tellier. Accordingly, the Applicant submits that claim 8 is patentable over any reasonable combination of Miki, Manini, Tellier, and Bartky.

(3) The Office Action rejected claims 20, 21, and 23-27 under 35 U.S.C. § 103(a) as being obvious over Miki in view Manini and Tellier, and further in view of U.S. Patent No. 6,347,861 to Tom et al. (“Tom”). The Applicant traverses this rejection. Nevertheless, claim 20, the independent claim, has been amended solely to further prosecution.

Claim 20, a process claim, has been amended in an analogous manner to claim 1, which as demonstrated above, is patentable over Miki, Manini, and Tellier for at least three reasons. Claim 20 is patentable over these references for the same reasons, and Tom does not remedy the

deficiencies of Miki, Manini, and Tellier. Accordingly, claim 20, and its dependent claims 21 and 23-27, are patentable over any reasonable combination of Miki, Manini, Tellier, and Tom.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant, therefore, respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is hereby invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,

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